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मानक

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IS 10263 (1982): Deep Fat Fryer, Single and Double Pan
Electrically Operated, for Large Catering Establishments
[MHD 12: Hospital Equipment]



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“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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Indian Standard



SPECIFICATION FOR DEEP FAT FRYER, SINGLE AND DOUBLE PAN ELECTRICALLY OPERATED, FOR LARGE CATERING ESTABLISHMENTS

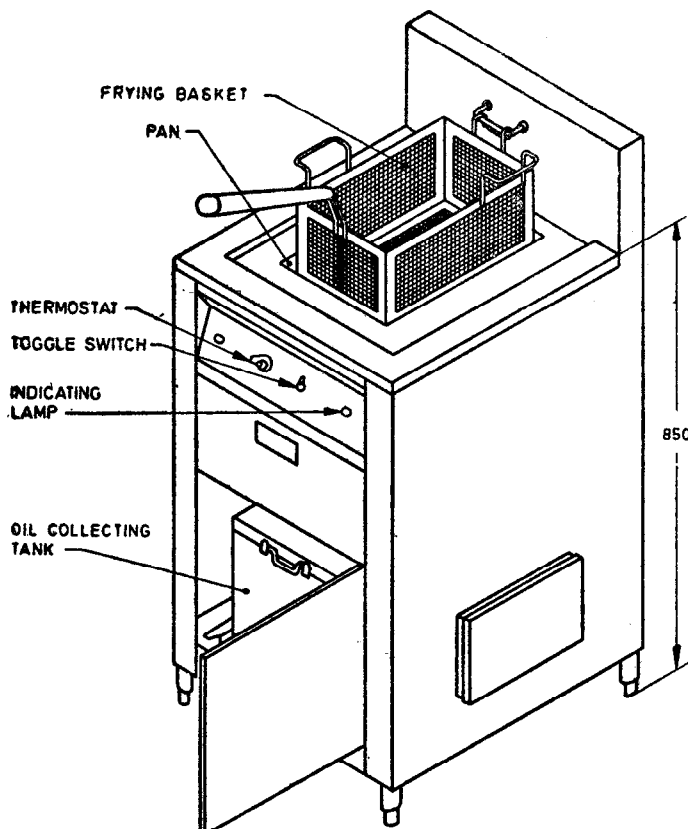
1. Scope — This standard prescribes the requirements for stainless steel deep fat fryer, single and double pan, electrically operated for large catering establishments, for example, hospitals, hotels, industrial canteens and clubs, etc.

2. Capacity — Deep fat fryer shall be constructed either in single pan or in double pan with a normal capacity of either 10 or 20 litres each. For the purpose of this standard, the normal capacity is the volume of cooking oil normally put for batch cooking and this shall be approximately 65 percent of the pan capacity.

3. Material — All metallic components, parts which come in contact with the cooking media shall be constructed from stainless steel conforming to Designation 04Cr18Ni11 or 07Cr18Ni10 of IS : 1570 (Part V)-1972 'Schedules for wrought steels: Part V Stainless and heat-resisting steel (first revision)'. The structural steel for frame shall be in accordance with IS : 226-1975 'Specification for structural steel (standard quality) (fifth revision)'. The aluminium sheet used for oil collecting tank shall be in accordance with IS : 737-1974 'Specification for wrought aluminium and aluminium alloys, sheet and strip (for general engineering purposes) (second revision)'.

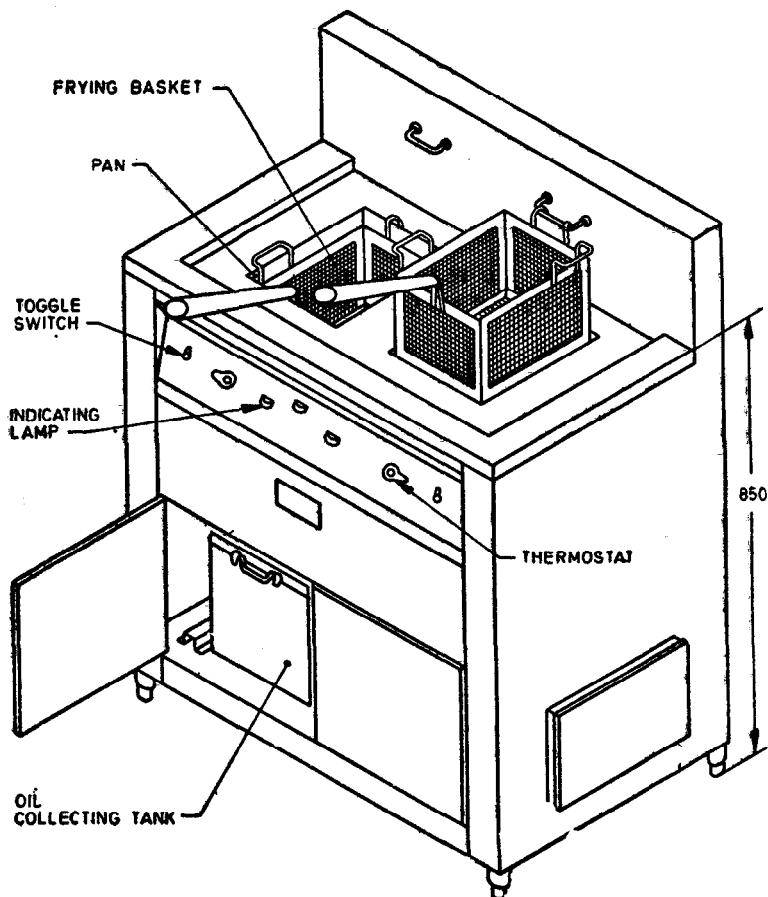
4. Shape and Dimensions — The pan shall be constructed in rectangular shape with bottom of conical, dished or combination of both for easy drainage of oil.

4.1 The general construction shall be as shown in Fig. 1 and 2.



All dimensions in millimetres.

FIG. 1 DEEP FAT FRYER, SINGLE PAN



All dimensions in millimetres.

FIG. 2 DEEP FAT FRYER, DOUBLE PAN

4.2 Nominal pan and basket size shall be as follows:

	Capacity l	Length, mm	Width, mm	Height, mm
pan	20	385	275	330
	10	300	200	260
basket	20	355	245	150
	10	270	170	100

4.3 If required by the purchaser other shapes like circular or oblong may also be provided.

4.4 Cold-zone surface below element shall be about 10 percent of the normal capacity of the pan.

5. Construction

5.1 *Pan* — The pan shall be formed out of stainless steel sheet with bottom shaped as in 4. The drain connector shall be welded at the bottom. The finished thickness of sheet of pan at any point shall be not less than 1.25 mm. There shall not be any sharp corners. The Joints shall be welded with a process suitable for stainless steel. The welding shall be sound and shall fully penetrate. The welding surfaces shall be buffed smooth. There shall be a permanent mark on the pan to indicate the normal capacity.

5.1.1 Pan shall be integral to the top platform. It shall be finished smooth and polished bright without crevices. The platform shall have raised borders on all sides, to prevent spillage of oil while cooking.

As agreed to between the manufacturer and the purchaser a splash back arrangement may be provided to prevent spillage of oil while cooking. Hanging arrangements shall be provided for placing the frying basket after frying for dripping the left out oil in the basket back into the frying pan.

5.1.2 Pan along with top platform shall be fitted on a sturdy framework covered with steel or stainless steel panel. Levelling screws shall be provided at the bottom for levelling purposes.

5.2 Frying Basket

5.2.1 Wire mesh of stainless steel of mesh size 3 mm square and 0.90 mm thickness shall be used. The wire mesh may be of crimped or plain type.

5.2.2 Frying basket shall be provided with a handle for holding the basket and a hook at the rear for hanging the basket in the hanger. For 20 l basket two handles may be provided if required by the purchaser. The minimum thickness of the handle arm shall be 6 mm. Suitable insulating grips on the handle arm shall be fixed which shall not break when fall from a height of 1 m. Two side supports for false bottom may be provided for supporting the basket when placed inside the pan for frying so that the basket does not rest on the heating element. One or more frying basket may be supplied with each pan as required by the purchaser.

5.3 Electric Heating

5.3.1 Electric heating shall be such that the frying temperature of 195°C shall be attained within a period of 30 minutes from ambient temperature of 30°C. The heating elements of 6 kW rating or any other suitable rating may be used for this purpose.

5.3.2 Special oil immersion heaters suitable for edible oil in accordance with IS : 4159-1976 'Specification for mineral filled sheathed heating elements (*first revision*)' shall be used.

5.3.3 Safety requirements as per IS : 302-1979 'General and safety requirements for household and similar electrical appliances (*fifth revision*)' shall be applicable.

5.4 Thermostat

5.4.1 A thermostatic device which shall cut off the supply at the set point and restart the supply as soon as the temperature drops below 5°C of the set point shall be used with various settings from 100 to 200°C.

5.4.2 Thermostat shall have a stop so that under no account the temperature can be set above 200°C otherwise oil will start cracking and may even catch fire.

5.5 Oil Collecting Tank — A tank for collecting oil shall be provided below the frying pan. The tank may be made of aluminium or stainless steel sheet with capacity of not less than the normal capacity of the pan. The collecting tank shall be detachable.

5.6 Top Lid for Pan — A stainless steel top lid with handle shall be provided to cover the pan when not in operation.

5.7 Maintenance — Heating element and thermostat shall be easily removable for maintenance purposes.

6. Marking — Each deep fat fryer shall have a name plate or label affixed to it showing the manufacturer's name, initials or registered trade-mark, the capacity and the electric rating of the equipment.

6.1 ISI Certification Marking — Details available with the Indian Standards Institution.

7. Test for Heating Time — Fill the pan with the oil equivalent to the normal capacity of the pan up to the level marked. Set thermostat to 195°C and start heating. Measure the temperature at the level of heating elements after 30 minutes heating at an ambient temperature of 30°C. During the test the lid shall be kept closed. The thermometer shall indicate reading of $195 \pm 2^\circ\text{C}$, after 30 minutes heating.

8. Instruction Manual — An instruction manual shall be provided with each equipment indicating in detail the operation and maintenance of the equipment.

9. Packing — As agreed to between the manufacturer and the purchaser.